

## ABSTRACT:

Software System, referred to as Image Transport Engine, for processing a sequence of images by deploying Image Processing Functions onto a multiprocessor system called Platform, which generates input image data in order to provide processed output image data. The Software System comprises a software data partitioning model, referred to as

5 Communication Pattern, which partitions the images of the sequence using time-stamped data packets, the transfer of which may overlap the execution of said image processing functions. The Communication Pattern is formed of Software Modules linked by oriented Connections associated to the Modules through Ports. Each Module activates one Image Processing

10 Function attached to it and manages data transfers and synchronization. The source Module partitions the Input Data into data packets that are Image Strips, formed of consecutive image lines. The Image Strips may overlap other Image Strips. Overlapping Areas formed of extra parts of Image Strips located on either sides of said Image Strips can be processed together with said Image Strips.

15 Fig. 1C